TABLE I. DEVICE PARAMETERS 1/

JPL PART # ST12210-	GENERIC PART #	MFR	MFR PART #	PKG TYPE	DETAIL SCREENING TESTS	ELECTRICAL CHARACTERISTICS & GROUP A TESTS	RADIATION (TID) LEVEL RAD(Si)
DO1001AR	SPD1001	SSD	SPD1001	DO-41 2/	TABLE III	TABLE IV	100K 3/

NOTES:

1/ THIS DRAWING, IN CONJUNCTION WITH CS515581, IMPOSES ALL REQUIREMENTS FOR PROCUREMENT OF THESE DEVICES.

2/ DEVICE PHYSICAL DIMENSIONS SHALL CONFORM TO FIGURE 1.

3/ SUFFICIENT RADIATION TOLERANCE TO THIS TID LEVEL IS GUARANTEED BY DESIGN FOR THIS DEVICE (SEE CS515581, PARAGRAPH 4.7.7).

4/ THIS DRAWING TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN..

RELEASED THRU SECTION 356 DATA MANAGEMENT: DATE:

REVISION: C APPROVED BY (Section 514): DATE:

APPROVED SOURCE(S)

VENDOR PART NO.	VENDOR	JPL PART NO.
SPD1001	SOLID STATE DEVICES, INC LA MIRADA, CA. 90638 CAGE NO 30043	ST12210-DO1001AR

The item listed in the approved source block and identified by vendor name, address, and part number will be evaluated and tested by the JPL Electronic Parts Reliability Section or its delegated alternate before being approved for use. Non-JPL users shall check with the Electronic Parts Reliability Section on the status of the part's approval before using.

JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY CAGE NO. 23835

Procurement Specification: CS515581

Screening Specification: ZPP-2Ø73-GEN

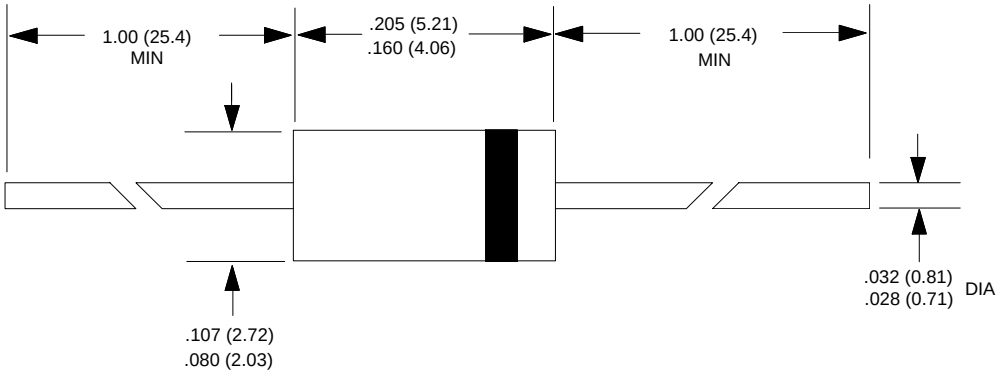
Custodian: Electronic Parts Reliability Section 514

TITLE: DIODE, SILICON RECTIFIER, POWER SCHOTTKY

DETAIL SPECIFICATION

ST12210

FILE: (Sec.514): F:\USERS\514\SPECS\ST12210.C



NOTES:

DIMENSIONS ARE INCHES (MILLIMETERS)

LEAD DIAMETER NOT CONTROLLED WITHIN .050" OF DIODE BODY.

FIGURE 1. PHYSICAL CONFIGURATION

TABLE II. MANUFACTURERS MAXIMUM RATINGS (T_A=25°C)

PARAMETER	RATING	UNITS
V_R	100	Vdc
I_O	1	A
$I_{FM(REP)}$	25	A
$R_{TH(J-L)}$	46	°C/W
T_J, T_{STG}	-65 TO 150	°C

TABLE III. DETAIL SCREENING REQUIREMENTS

SCREEN (SEE MIL-S-19500, TABLE II)	TEST CONDITIONS/REQUIREMENTS
3. TEMPERATURE CYCLE	AS SPECIFIED (-55°C TO 150°C)
9. I NTERIM ELECTRICAL PARAMETERS	V_{F1}, I_{R1} PER TEST CONDITIONS AND LIMITS OF TABLE IV.

10. HIGH TEMPERATURE REVERSE BIAS (HTRB)	MIL-STD-750, METHOD 1038, CONDITION A,
11. INTERIM ELECTRICAL AND DELTA PARAMETERS.	SAME PARAMETERS AS STEP 9 ABOVE. DELTA LIMITS: ΔI_{R1}= ±20% OF INITIAL OR ±100 uA , WHICHEVER IS GREATER. ΔV_{F1}=±25 mV FROM INITIAL VALUE.
12. POWER BURN-IN	MIL-STD-750, METHOD 1038, CONDITION B; OPERATED AS HALF-WAVE RECTIFIERS; 240 HOURS AT T_A=25°C, V_R= 80% MAX RATED PER TABLE II; I_O= MAX RATED PER TABLE II; f= 60Hz
13. FINAL ELECTRICAL TESTS A. PARAMETERS B. DELTA LIMITS	 SUBGROUPS 2 AND 3 OF TABLE IV. SAME PARAMETERS AND LIMITS AS 11 ABOVE.

TABLE IV. GROUP A ELECTRICAL TESTS

TEST	MIL-STD-750 METHOD	TEST CONDITIONS	LIMITS		
			MIN	MAX	UNITS
SUBGROUP 2 T_A=25°C, BREAKDOWN VOLTAGE, B_V	4021	I_R=200 uA	100		Vdc
REVERSE LEAKAGE, I_{R1}	4016	V_R=100 Vdc		200	uA
FORWARD VOLTAGE, V_{F1}	4011	I_F=0.5 Adc 1/		0.75	Vdc
FORWARD VOLTAGE, V_{F2}	4011	I_F=1.0 Adc 1/		0.95	Vdc
CAPACITANCE, C_1	4001	V_R=10 Vdc, f=1 MHZ		30	pf
SUBGROUP 3 TEMPERATURE TESTS REVERSE LEAKAGE, I_{R2}	4016	V_R=100 Vdc, T_A=100°C,		10	mA
SUBGROUPS 4 THROUGH 7 2/					

NOTES:

1/ PULSE TEST: PULSE WIDTH ≤ 300usec; DUTY CYCLE ≤ 2%.

2/ THESE TESTS NOT REQUIRED UNLESS SPECIFIED.

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